

REMARKS

Claims 3, 6 and 9-10 are currently pending in the application. By this amendment, claim 10 is added for the Examiner's consideration. The above added claim does not add new matter to the application and are fully supported by the specification. For example, support for the added claim is provided at page 3 of the specification. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

35 U.S.C. §102/103 Rejection

Claims 3, 6 and 9 were rejected under 35 U.S.C. §102(b) or alternatively 35 U.S.C. §103(a) by applicants' admitted prior art (AAPA). This rejection is respectfully traversed.

The Examiner notes that claim 1 is a product by process claim, and that all of the features of the final product recited in the claimed invention are shown in the AAPA. Applicants note that MPEP 2113 states:

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."

However, Applicants submit that the product of the claimed invention is different than that of the AAPA. In fact, as admitted by the Examiner, all of the features of the claimed invention are not shown in the AAPA, thus making the §102(b) rejection improper. By way of example, the claimed invention clearly recites:

...a contour of the open end portion is shaped nearly like an ellipsoid having a major axis and a minor axis.

This feature is not shown or even remotely contemplated or possible with the AAPA. As suggested by the Examiner, the deburring method of the AAPA would result in a "circular chamfer." (See Office Action, paragraph 4.)

Additionally, as discussed in the AAPA, to remove a burr, a cutting part of a cutting tool is inserted into the through hole from the outside. When the cutting part is projected into the fitting hole from the open end of the through hole, the cutting part is outthrust to abut against the open end portion of the through hole. Then, the cutting part is rotated to remove the burr. Upon completion of deburring, the tool having the cutting part is returned to a central portion of the through hole.

By using the method of the AAPA, the contour of the open end portion would not be shaped nearly like an ellipsoid having a major axis and a minor axis. Instead, the opening would remain circular, with the burrs removed. This is simply because the cutting tool enters the through hole from the outside, which is the opposite side required by the claimed invention. To make the contour ellipsoid, it would not be possible from this vantage, without distorting the shape of the entire through hole, which is clearly disadvantageous and not contemplated by the AAPA.

The Examiner further suggests that there is no advantage of having the ellipsoid contour of the opening. It would appear that the Examiner is using this reasoning as a criteria for the §103(a). However, this is not proper, in of itself. According to MPEP 2142

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both

be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants submit that these criteria have not been met. For example, there is simply no suggestion, whatsoever, that the AAPA would have an ellipsoidal shape. In fact, as discussed herein, such a shape would not be possible using the methods discussed in the AAPA. The Examiner even admits that the AAPA does not show the ellipsoidal shape, but instead shows a circular shape. Second, there is no suggestion or motivation to change the shape of the opening in the opening of the through hole. The only suggestion is to have a circular hole, in view of the deburring method shown and disclosed in the AAPA.

Also, MPEP 2141.02 states:

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983)

In the present matter, Applicants submit that, as a whole, the claimed invention is not obvious in view of the AAPA. In fact, Applicants submit that in view of the fact that the AAPA creates a circular opening, by using a conventional deburring method, one of skill in the art would not have known how to obtain an ellipsoid opening, as claimed. This simply would have not been possible using the conventional art.

Additionally, according to MPEP 2141.02:

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)

Applicants submit that the AAPA would lead away from the claimed invention. By way of illustration, and as discussed above, the AAPA discloses a conventional deburring method which would result in a circular shape in the through hole opening; whereas, the claimed invention clearly recites an ellipsoidal shape. It would appear that the AAPA thus teaches away from the shape of the claimed invention.

Accordingly, Applicants respectfully request that the rejection over claims 3, 6 and 9 be withdrawn.

New Claim

Claim 10 is added for the Examiner's consideration. Claim is dependent from allowable base claim 3. Claim 10 further defines the contour, a feature not shown in the AAPA.

CONCLUSION

In view of the foregoing remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required.

Respectfully submitted,
Toru Shimosato, et al.



Andrew M. Calderon
Registration No. 38,093

Greenblum & Bernstein, P.L.C.
1950 Roland Clarke Place
Reston, Virginia 20191
Telephone: 703-716-1191
Facsimile: 703-716-1180